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| **Unit Title:** Addition and Subtraction of Decimals | **Pacing (Duration of Unit):** 4 Weeks |

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| **Desired Results** |

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| **Transfer Goals (**Priority practice standards in **bold)** |
| *Students will be able to independently use their learning to:*   1. **Make sense of problems and persevere in solving them.** 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. **Model with mathematics.** 5. Use appropriate tools strategically. 6. **Attend to precision.** 7. **Look for and make use of structure.** 8. Look for and express regularity in repeated reasoning. |

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| **Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)** |

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| **Prerequisite Standards:**   * 4.NBT.4: Fluently add and subtract multi-digit whole numbers using the standard algorithm. * 4.NF.7: Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model. | **WIDA Standards(ELL)**  **WIDA for English Language Learners**  Standard 1: ELLs **communicate** for **Social** and **Instructional** purposes within the school setting  Standard 3: ELLs **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics** |
| **Standards** (Priority Standards in **bold**):   * 5.NBT.1: Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. * 5.NBT.2: Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. * 5.NBT.3: Read, write, and compare decimals to thousandths.   + 5.NBT.3a: Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 x 100 + 4 x 10 + 7 x 1 + 3 x (1/10) + 9 x (1/100) + 2 x (1/1000).   + 5.NBT.3b: Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. * 5.NBT.4: Use place value understanding to round decimals to any place. * **5.NBT.7: Add, subtract,** multiply, and divide **decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.** | In the lesson planning stage, teachers will need to differentiate lessons for ELLs. In order to accomplish this they will need: 1.) this curriculum map, 2.) a list of their ELLs and their proficiency levels, and 3.) appropriate language function expectations and scaffolds or supports. |

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| **Meaning (\*Mostly assessed through Performance Tasks/Assessments)** |

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| **Big Ideas:** (Statements and concepts written in teacher friendly language which reflect the important [but not obvious] generalizations we want students to be able to arrive at. These are used by the teacher to focus daily instruction.)   * There are a variety of strategies and models that can be used to represent and solve numerical expressions. * Addition and subtraction are inverse operations. * A decimal represents the fractional part out of a power of 10 (a tenth, a hundredth, a thousandth, etc.) * The decimal point separates the whole number part from the fractional part of a number. * Addition and subtraction of decimals is based on the fundamental concepts of addition and subtraction of whole numbers, but uses fractional parts. | **Essential Questions:** (Questions which frame ongoing and important inquires about the big ideas. They are written for students and used in daily instruction to help engage students in meaningful thinking.)   * How do we solve problems with whole numbers and decimals? * Why is place value important when adding and subtracting whole numbers and decimals? * What questions can be answered by adding and subtracting decimals? * How are addition and subtraction of whole numbers related to addition and subtraction of decimals? |

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| **Acquisition (\*Mostly assessed through traditional summative assessments)** | |
| **Knowledge:** Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.  ***Students will know …***   * That addition and subtraction are inverse operations * That adding and subtracting decimals use the same methods as adding and subtracting whole numbers * That there are multiple ways to add and subtract decimals in the hundredths   **Key Academic Vocabulary:**   * Addition Standard Algorithm * Subtraction Standard Algorithm * Visual Representations. * Addend, sum and difference | **Skills:** The discrete skills and process students should be able to use independently  *Students will be skilled at:*   * Adding and subtracting decimals to the hundredths using the standard algorithm. * Using concrete models and drawings to add and subtract decimals. * Solving problems involving addition and subtraction of decimals. * Explaining their reasoning for solving problems. |

**Resource Suggestions:**

Add decimals game<http://pbskids.org/cyberchase/math-games/railroad-repair/>

How to, Explanation, Worksheet Practice<http://www.mathsisfun.com/adding-decimals.html>

How to, Explanation, Worksheet Practice<http://www.mathsisfun.com/subtracting-decimals.html>

**Interactive Games** [**http://interactivesites.weebly.com/math.html**](http://interactivesites.weebly.com/math.html) *(Click on unit topic)*

**Common Core Georgia Performance Standards:**  Add & Subtract Decimals

**Illustrative math** <http://www.illustrativemathematics.org/5>

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| **Standard(s)** | [**Link**](http://www.illustrativemathematics.org/5) |
| 5.NBT.7 | [5.NF What is 23 ÷ 5?](http://www.illustrativemathematics.org/illustrations/292)  [5.NBT The Value of Education](http://www.illustrativemathematics.org/illustrations/1293) |

**K-5 Math Resources** <http://www.k-5mathteachingresources.com/5th-grade-number-activities.html>

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| **Standard(s)** | [**Link**](http://www.k-5mathteachingresources.com/5th-grade-number-activities.html) |
| 5.NBT.7 | [Decimals of the Week](http://www.k-5mathteachingresources.com/support-files/decimals-of-the-week.pdf) Use as morning work or for homework!  [Base 10 Pictures with Decimals](http://www.k-5mathteachingresources.com/support-files/base-10-pictures-with-decimals.pdf)  [Base 10 Buildings with Decimals](http://www.k-5mathteachingresources.com/support-files/base-10-buildings-with-decimals.pdf)  [Base 10 Decimal Bag Addition](http://www.k-5mathteachingresources.com/support-files/base-10-decimal-bag-addition.pdf)  [Base 10 Decimal Bag Subtraction](http://www.k-5mathteachingresources.com/support-files/base-10-decimal-bag-subtraction.pdf)  [Total Ten](http://www.k-5mathteachingresources.com/support-files/totalten.pdf)  [Decimal Cross Number Puzzles](http://www.k-5mathteachingresources.com/support-files/decimal-cross-number-puzzles.pdf)  [Decimal Subtraction Spin](http://www.k-5mathteachingresources.com/support-files/decimalsubtractionspin.pdf)  [Decimal Addition to 500](http://www.k-5mathteachingresources.com/support-files/decimaladditionto500.pdf)  [Decimal Addition Bingo](http://www.k-5mathteachingresources.com/support-files/decimaladditionbingo5.nbt7.pdf)  [Decimal Race to Zero](http://www.k-5mathteachingresources.com/support-files/decimalracetozero5.nbt7.pdf)  [Decimal Magic Triangle](http://www.k-5mathteachingresources.com/support-files/decimalmagictriangle5.nbt7.pdf)  [Magic Squares (adding decimals)](http://www.k-5mathteachingresources.com/support-files/magicsquaresadditiondecimals.pdf) |

**Technology (videos)**

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| **Standards** | **Link** |
|  | [Scholastic Study Jam: Adding and Subtracting Decimals](http://studyjams.scholastic.com/studyjams/jams/math/decimals-percents/add-sub-decimals.htm) |
|  | [Virtual Manipulative: Decimal Tiles](http://www.abcya.com/decimal_tiles.htm) |
| 5.NBT.7 | <http://www.khanacademy.org/math/cc-fifth-grade-math/cc-5th-arith-operations/cc-5th-add-sub-decimals>  <http://www.khanacademy.org/math/cc-fifth-grade-math/cc-5th-arith-operations/cc-5th-sub-decimals> |

**GO MATH**

**STANDARDS:** 5NBT1; 5NBT2; 5NBT3; 5NBT4; **5NBT7**

**\*\*\* All lessons pertaining to 5NBT1, 2, 3, and 4 correspond to Unit Guide 1 as well as Unit Guide 2. In addition:**

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| **STANDARDS** | **LESSON #** | **TITLE** |
| **5NBT7** | **3.5** | **Investigate - decimal Addition** |
| **5NBT7** | **3.6** | **Investigate - Decimal Subtraction** |
| **5NBT7** | **3.7** | **Estimate Decimal Sums and differences** |
| **5NBT7** | **3.8** | **Add Decimals** |
| **5NBT7** | **3.9** | **Subtract Decimals** |
| **5NBT7** | **3.10** | **Algebra - Patterns with Decimals** |
| **5NBT7** | **3.11** | **Problem Solving - Add & Subtract Money** |
| **5NBT7** | **3.12** | **Choose a Method** |
| **5NBT7** | **5.2** | **Investigate - Divide Decimals by Whole Numbers** |
| **5NBT7** | **5.3** | **Estimate Quotients** |
| 5NBT2, **5NBT7** | **5.4** | **Division of decimals by Whole Numbers** |
| **5NBT7** | **5.5** | **Investigate - Decimal Division** |
| 5NBT2, **5NBT7** | **5.6** | **Divide Decimals** |
| **5NBT7** | **5.7** | **Write Zeroes in the Dividend** |
| **5NBT7** | **5.8** | **Problem Solving - Decimal Operations** |

**\*Standard 5NBT2 is addressed in lessons 4.1, 4.3, 4.4, 4.6, 4.7, 4.8, which also address priority standard 5NBT7. Therefore lessons are listed in unit guide 3 with priority standard 5NBT7.**